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Connective Cities Urban Practitioners' Workshop

From Waste to Resource - Integrated Municipal
Solid Waste Management Solutions

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In cooperation with



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CONNECTIVE CITIES

International Community of Practice for Sustainable Urban Development

Cities are gaining increasing importance globally, and urban actors all over the world are facing similar urban development issues. Although local solutions are required, these issues are becoming increasingly relevant at the global level. While many innovative solutions for sustainable urban development exist at local level, for example in energy efficiency, mobility or municipal services, frequently these are not widely known. Often there is a lack of systematic access to these practical solutions. The pressing challenges posed by worldwide urbanisation call for efficient and innovative approaches, especially in the areas of good urban governance, integrated urban development, local economic development and municipal service provision – our four focal themes.

Connective Cities, the International Community of Practice for Sustainable Urban Development, is a joint venture between the Association of German Cities (Deutscher Städtetag), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and the Service Agency Communities in One World (a division of Engagement Global). Connective Cities is supported by the German Federal Ministry for Economic Cooperation and Development (BMZ).

Connective Cities provides demand-based services designed to improve cooperation among urban practitioners at global level. The platform enhances the sharing of good practice examples, expert knowledge and solution-oriented peer-to-peer consulting, and creates opportunities for partnerships among different stakeholders. Connective Cities creates a base for knowledge sharing and the development of transformative solutions in local contexts that are customised to local requirements for sustainable urban development.

By conducting dialogue events and project workshops, Connective Cities facilitates exchange among urban practitioners on relevant themes, and functions as a platform for a networking strategy. To implement the strategy, Connective Cities also organises trainings, study tours, virtual discussion forums and webinars. Working within Connective Cities can result in new forms of cooperation among the actors involved. The platform also aims to facilitate the initiation of joint projects among urban practitioners from various local settings, in order to disseminate innovative solutions in sustainable urban development.

Background & Objectives



The global trend of urbanization goes hand in hand with the responsibility to adequately handle growing quantities of waste. Solid Waste Management (SWM) is an issue of high concern for cities in Turkey.

In a recent survey conducted by UCLG-MEWA, 91% of their Turkish member municipalities revealed the need for improvements in waste management. While national entities are charged to establish legal frameworks for waste management, the responsibility to provide and operate this fundamental public service rests with local governments and their public utilities.

Yet in Turkey, the past years have brought new complexities in this arena with the establishment of 16 new metropolitan municipalities and the reception of nearly 3 million Syrian refugees into Turkish cities. Municipalities are therefore facing new challenges in providing their citizens with adequate SWM services.

In response to this, Connective Cities and UCLG-MEWA developed a workshop concept, which aimed at supporting urban waste management practitioners from Turkey and Germany in learning from each other. In the framework of the “Municipal know-how for host communities in the Middle-East” programme, 34 practitioners from German (Cologne, Bremen) and Turkish (Istanbul, Gaziantep, Karesi, Ordu, Hatay, Malatya, Sultanbeyli, Pendik, TBB, İstac AS, Nevşehir, Rize, Kocaeli, Konya, Selçuklu, Mersin, Şanlıurfa, Mardin, Gebze) municipalities exchanged on good practices and advised each other for creating local action plans that improve solid waste management in an integrative manner. As a first Turkish-German exchange within the Community of Practice for Sustainable Urban Development, the workshop hosted by İZAYDAŞ (Kocaeli) fostered an understanding of legal, financial and technical capacity of German and Turkish, but also of large and small municipalities.

Methodology

The workshop was structured into three steps during the three workshop days, each building upon the other.

1. Firstly, two keynote speeches summarized the present situation on solid waste management in Turkish Cities.

In the afternoon, a number of participants presented good practices from Turkish and German cities, which illustrated application-oriented strategies for improving SWM.

2. On the second day, the practitioners identified and discussed actual challenges from their cities. Working in small groups, all participants contributed in a peer-to-peer advisory session to discuss and advise one another on the cases presented on the first day.

3. The third day of the workshop consisted primarily of the action planning session, where the practitioners developed outlines of potential actions tackling their current problems in SWM. Finally, participants had the opportunity to define and agree on their potential future collaboration in the field of SWM.

Starting Situation



Resulting from changing lifestyles and consumer patterns Turkey is facing the challenge of increasing amounts of packaging waste. Overall 82 million inhabitants in nearly 1400 municipalities - with 83% of them being metropolitan - are producing recyclable packaging waste that comprises 20% in weight and nearly 50% in the volume of the total amount of solid household waste.

The total amount of solid waste collected and disposed in Turkey ranges to more than 25 million tons a year. Out of this, around 17 million tons are disposed in landfills, which has led to an increase of landfill sites from 83 in 2005 to an assumed 105 in 2017. The issue inevitably triggers a shift in waste management priorities, as reduction of waste disposal into landfills is necessary.

With the support of advocating more strongly for solid waste reduction, reuse and recycling (see graph to the

right), Turkish municipalities also need to ensure a transition towards sustainable management of the growing amounts of waste, as Osman Senaydin from the Union of Municipalities of Turkey presented in his keynote speech.





For a more detailed insight on how these transformations are taking place on a local level, Hüseyin Kilic, Head of Waste Management of the Kocaeli Metropolitan Municipality, provided an opening note to illustrate all the measures currently implemented in Kocaeli. He uncovered that the amount of municipal waste disposed in sanitary landfills has increased by nearly 100 thousand tons in the last five years. The share of packaging waste in Kocaeli Metropolitan Municipality reaches nearly 30%, but the share of organic waste increased by 14% since 2008, comprising 56% of solid waste.

The district municipality of İzmit, Kocaeli - where the workshop was held and hosted by the municipal company İZAYDAŞ - exhibited their effort in waste management solutions. During a technical on-site visit the İZAYDAŞ company illustrated several techniques for reprocessing and treating the collected incoming solid waste in İzmit. The vast area of the plant consists of

a large incineration plant and a sanitary landfill, as well as a landfill gas plant, a seepage water plant and a newly built biogas plant. Additionally, İZAYDAŞ is equipped with a laboratory for conducting chemical analysis of the waste, a sterilization plant for treating toxic waste and further facilities.





Good Practices

Following the keynote speeches, the practitioners from Turkey and Germany gave a short overview of the current solutions in Solid Waste Management from their municipalities. Consequently, the good practices were divided into three thematic groups:

- institutional settings and financing models;
- collection and transfer;
- sustainable disposal, recycling and reuse.

In these smaller groups the good practices were presented in more detail. Subsequently, the different approaches were examined in terms of their preconditions and innovation and especially the issue of transferability was discussed extensively.

These discussions resulted in a broad exchange on the different approaches of solid waste management in Turkey and Germany, as well as with first considerations of appropriate transfers. As an example, the question of whether prohibiting sanitary landfills would be applicable in Turkey was raised.

Furthermore, an area of recommendations was identified concerning technical improvements on incineration. A first exchange of ideas on collection systems and waste transfer was also started among Turkish cities.

This initial exchange of good practices laid the foundation and sparked the interest of practitioners for discussing detailed processes and challenges on the following day.



THEMATIC FOCUS	MUNICIPALITY	KEY ASPECTS
INSTITUTIONAL SETTINGS and FINANCING MODELS	Integrated Environment Project of MALATYA, Turkey	Strong organisational communication Intensive collaboration between all planning parties
	Financing of Solid Waste Management Projects COLOGNE, Germany	Establishment of SWM fee system Securing financing in all levels: national, municipal, entrepreneurial
	Waste-Management and the Legal Base in BREMEN, Germany	Municipal waste fee system Informing the citizens Energy recovery from waste
COLLECTON and TRANSFER	Waste Transfer in Integrated Solid Waste Management SANLIURFA, Turkey	Importance of transport coordination
	Fevzipasa Solid Waste Transfer Station GAZIANTEP, Turkey	Importance of comprehensive facility design and location selection
	Solid Waste Collection System of KARESI, Turkey	Collaboration with the public as well as local and state governments Feasibility and performance studies
SUSTAINABLE DISPOSAL, RECYCLING and REUSE	Sustainable Management of a Sanitary Landfill ISTANBUL, Turkey	Reducing the use of landfills Producing energy from waste
	Organic Waste Recycling in COLOGNE, Germany	Production of high quality compost from organic waste Previous analysis and plant preparation
	Mechanical Separation Facility of Ordu-Ünye ORDU, Turkey	Production of Refuse Derived Fuel Separation of organic waste Collection of industrial waste

Peer-to-peer Advisory

The second day of the workshop was designed to analyse specific challenges of the participants and foster the exchange between the experts in solid waste management. Based on the previous discussions, working groups for peer-to-peer advice were formed on specific topics, such as incineration plants, sorting at the source and system comparison between Turkey and

Germany. Furthermore, specific local challenges from Hatay on SWM legislation and rapid population growth through migration were analysed. To enable efficient peer-to-peer advisories, the small groups firstly posed a leading question, followed by a discussion on the current situation and lastly, offered recommendations and solution approaches.

Discussion Groups:



SWM system comparison Turkey - Germany

Current SWM system in Germany was analysed regarding separation, recycling, incineration and composting, and lessons learnt drawn for implementation in Turkey.

Incineration plants

The most advantageous burning processes and feasibility of incinerating wet waste were discussed.



Legislation in Hatay on SWM

Improving the coordination between municipalities and ministries on SWM legislation changes stood in the focus of this advisory session.

Sorting at the source

The challenges of different waste sorting systems in place in Turkey and solution approaches for their effective unification were elaborated on.



SWM in rapid population growth

Issues with solid waste management in case of rapid population growth i.e. reception of refugees, as well as possible emergency plans were considered.



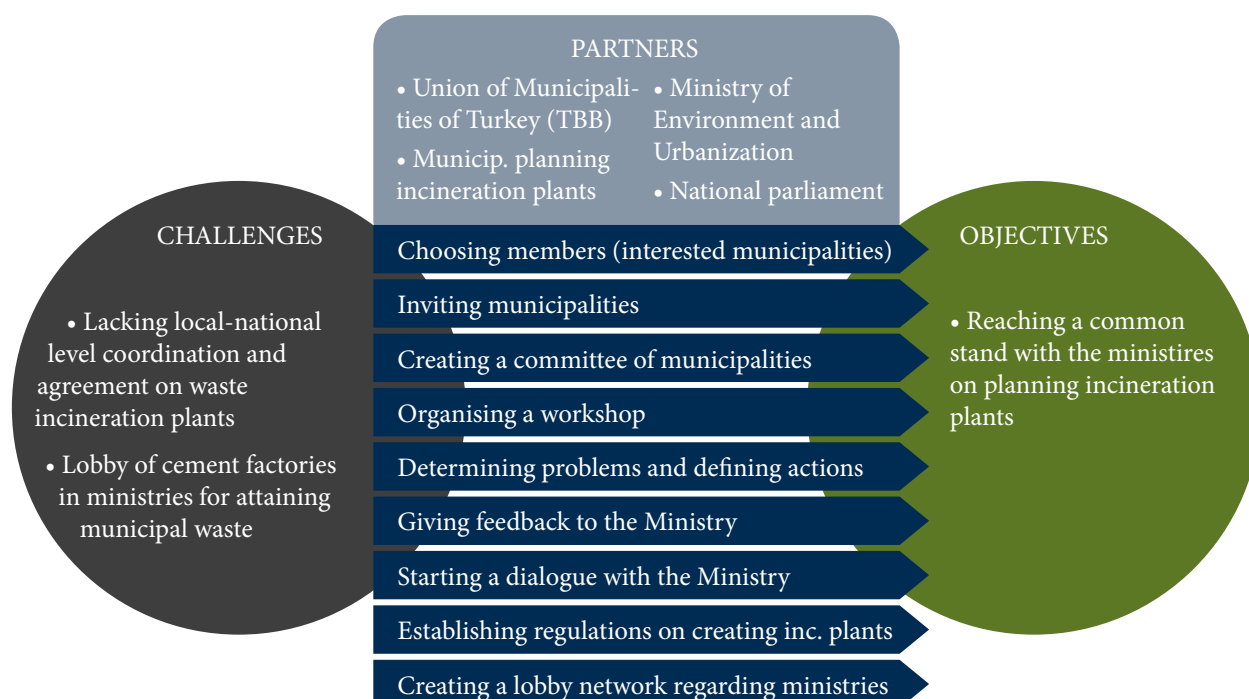
Action Planning

On the last day of the workshop, the participants developed specific project ideas based on their exchange of the last days.

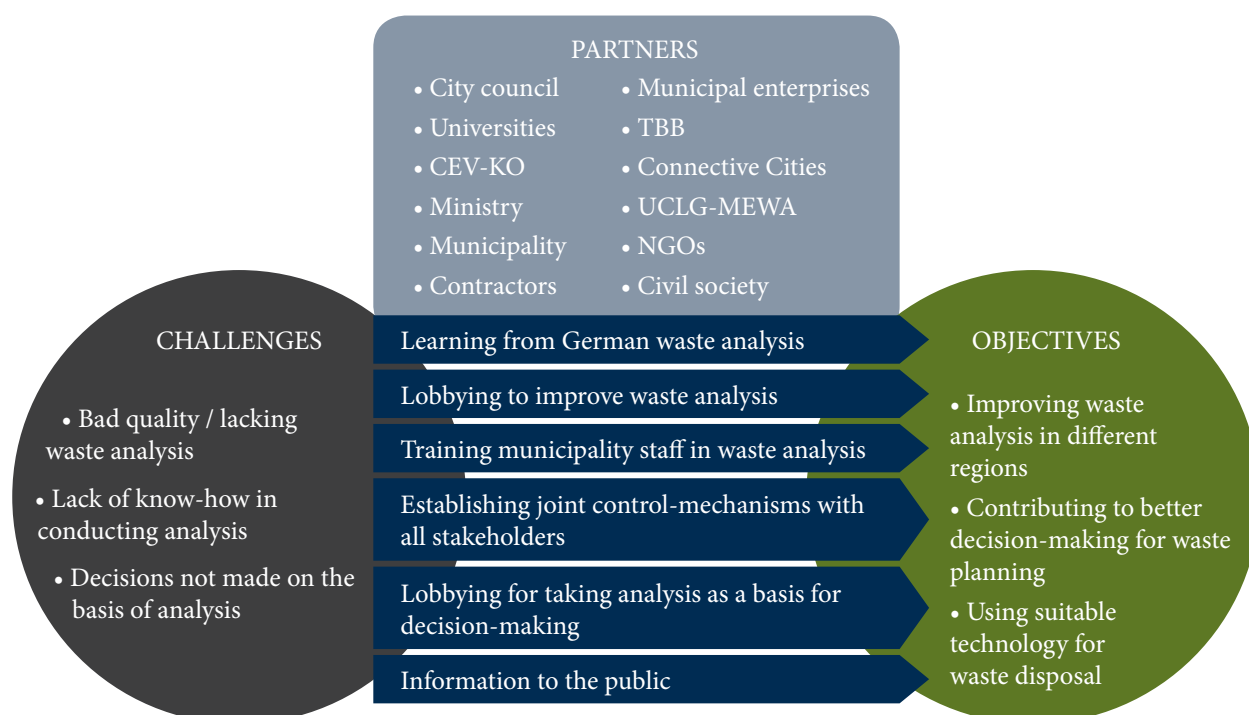
Using the action-planning method, the experts defined four different fields within solid waste management, where they want to take concrete actions.



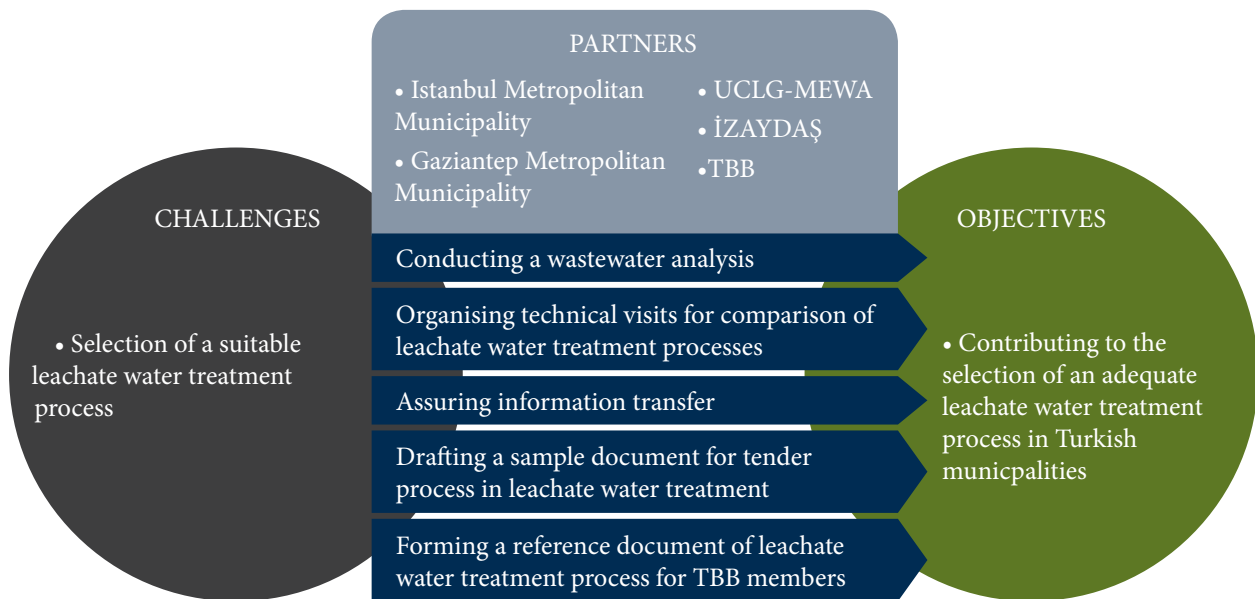
Project 1: Finding Common Ground on Planning Incineration Plants



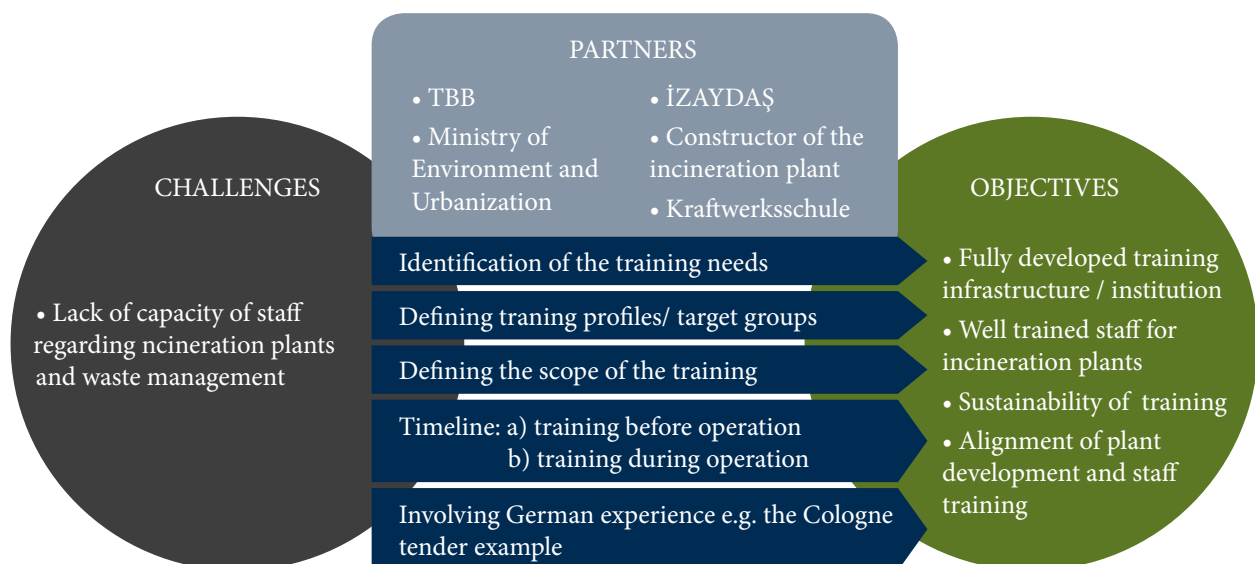
Project 2: Improving Waste Analysis and Planning



Project 3: Determining an Adequate Leachate Water Treating Process



Project 4: Staff Training on Incineration Plants and Waste Management





Reflection and Conclusion

The urban practitioners' workshop was finalised with feedback and reflections on the results achieved during the three days of interactive sessions and knowledge exchange.

The workshop facilitated acquiring a good understanding of legal, financial and technical conditions in German and Turkish, but also in large versus small municipalities, and established a basis for further cooperation. The participants appreciated the intensive exchange with fellow experts and expressed their interest to continue the exchange, especially among the members of the Turkish Union of Municipalities (TBB).

Connective Cities in coordination with UCLG-MEWA and in the framework of the "Municipal know-how for host communities in the Middle-East" programme will strive to further support the development of emerging local projects by linking them with expertise and offering content-related services for strengthening the capacities of municipal experts and their cities in partnership between German and Turkish practitioners.



A contribution to



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E info@connective-cities.net
www.connective-cities.net

Connective Cities is a joint project of

Association of German Cities
Gereonstraße 18 – 32, 50670 Cologne | Germany
Project contact:
Benjamin Jeromin
E Benjamin.Jeromin@engagement-global.de

Engagement Global gGmbH / Service Agency
Communities in One World
Tulpenfeld 7, 53113 Bonn | Germany
Project contact:
Alexander Wagner
E Alexander.Wagner@engagement-global.de

Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH
Friedrich-Ebert-Allee 40, 53113 Bonn | Germany
Project contact:
Dr. Manfred Poppe
E Manfred.Poppe@giz.de

Editorial team
Ingrid Roesner, Eva Prediger, Maximilian Foertner, Eva Sule

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Eva Sule, Maximilian Foertner

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Addresses of the BMZ offices

Bonn Office
Dahlmannstraße 4
53113 Bonn
Germany
Tel. +49 (0) 228 99 535-0
Fax +49 (0) 228 99 535-3500

Berlin Office
Stresemannstraße 94
10963 Berlin
Germany
Tel. +49 (0) 30 18 535-0
Fax +49 (0) 30 18 535-2501

poststelle@bmz.bund.de
www.bmz.de

